* Baking soda and vinegar in a corked glass bottle - why does the cork fly off?
* Add bicarbonate of soda to a glass containing vinegar and six currants. Why do the currants move up and down? What are the bubbles? Where are the bubbles coming from?
* Making sherbet – mix four parts icing sugar, two parts citric acid and one part baking soda (these are all available from supermarkets). Students put a small amount of the mixture on their tongue. What causes the fizz? Do any of the powders on their own produce a fizz?
* Half fill a jar with steel wool (without soap) and add enough vinegar to cover the steel wool. Leave for five days. Pour one tablespoon of the resulting liquid into a second jar. Add one teaspoon of household ammonia and stir. A dark green [glutinous](http://www.education.vic.gov.au/studentlearning/teachingresources/science/scicontinuum/sciglossaryak.htm#glutinous) material will form. Again, students should be asked to consider what is happening - the emphasis being on developing an understanding that new materials are being produced.
* Making caramel - students are asked to investigate sugar. Warm a concentrated sugar solution, observing the changes along the way - sugar dissolving, then browning. Caramelising involves a series of chemical changes. (There are many caramel recipes - butter, baking soda and salt can all be added to improve taste, appearance and texture). Students should be encouraged to look for evidence of chemical changes as opposed to melting.
* Will chilling an onion before cutting it [keep you from crying](http://chemistry.about.com/od/chemistryfaqs/f/onionscry.htm)?
* If you shake up different kinds or brands of soft drinks (e.g., carbonated), will they all spew the same amount?
* Do all breakfast cereals that say they have 100% of the US RDA for iron *really* have the same amount? (here's [the test](http://chemistry.about.com/cs/howtos/ht/ironfromcereal.htm))
* Are all potato chips equally greasy (you can crush them to get uniform samples and look at the diameter of a grease spot on brown paper)? Is greasiness different if different oils are used (e.g., peanut versus soybean)?
* Does eating breakfast have an effect on school performance?
* Do the same types of mold grow on all types of bread?
* Does increasing the ethylene concentration ripen fruit more quickly.
* Does light effect the rate at which foods spoil?
* Do foods containing preservatives really stay fresh longer than foods without them?
* How does time or season of harvest affect the chemistry and nutritional content of food?
* Does exposure to light affect the [amount of vitamin C](http://chemistry.about.com/od/demonstrationsexperiments/ss/vitctitration.htm) in juice?
* Can you use a household water filter to remove flavor or color from other liquids?
* Does the power of a microwave affect how well it makes popcorn?
* Can you tell/taste the difference between ground beef, chuck, and round after they have been cooked?